

Sangui262-04

Patent claims

- 5 1. Wound dressing, characterized in that they display from 19 to 56% of one or more structural proteins, 18 to 58% of one or more structural polysaccharides, 0.5 to 10 % polycarbonic acids, 0.1 to 15 % polyfunctional amino acids, 0 to 10% active substances 0 to 30% excipients and/or additives, and 0.2 to 5% cross-linking agents.
- 10 2. Wound dressing according to claim 1, characterized in that it contains as structural proteins collagen, gelatine, derivatives or mixtures thereof.
- 15 3. Wound dressing according to claims 1 or 2, characterized in that it contains as the structural polysaccharide chitosan and (or), chitosan derivatives or mixtures thereof.
- 20 4. Wound dressing according to one of claims 1 to 3, characterized in that the polycarbonic acid is chosen from: lactic acid, malic acid, succinic acid, malonic acid, fumaric acid, ascorbic acid, glutaminic acid, salicylic acid, pyrrolidone carbonic acid or mixtures thereof.
- 25 5. Wound dressing according to one of claims 1 to 4, characterized in that as polyfunctional acids the following are present: arginine, methionine, proline, taurine, glycine, alanine, cysteine, N-acetylcysteine or mixtures thereof.
- 30 6. Procedure for the production of a wound dressing, containing 19 to 56% of one or more structural proteins, 18 to 58 % of one or more structural polysaccharides, 0.5 to 10 % polycarbonic acids, 0.1 to 15 % polyfunctional amino acids, 0 to 10% active substances, 0.2 to 5 % cross-linking agents, 0 to 30 % excipients and/or additives, characterized in that to an aqueous solution of the polysaccharide a polycarbonic acid is added and to an aqueous solution of a structural protein is added the same or a different polycarbonic acid, subsequently both polymer solutions are dialyzed together and then polyfunctional amino acids and

active substances, cross-linking agents, additives and excipients of the dialyzed reaction mixture are added if necessary.

- 5 7. Procedure according to claim 6, characterized in that collagen of various origin is used as the structural protein.
8. Procedure according to claim 7, characterized in that gelatine type A and type B are used as the structural protein.
9. Procedure according to claim 8, characterized in that high-molecular gelatine with a Bloom value of greater than 200 is used.
- 10 10. Procedure according to claims 6 to 9, characterized in that as the polysaccharide chitosan, its water-soluble derivatives or mixtures thereof are used.
11. Procedure according to claim 10, characterized in that chitosan with a molecular weight of greater than 200 kDa is used.
12. Procedure according to claims 6 to 11, characterized in that as the polycarbonic
15 acid succinic acid, lactic acid, malic acid, fumaric acid, ascorbic acid, glutaminic acid, salicylic acid, pyrrolidone carbonic acid or mixtures thereof are used.
13. Procedure according to claim 6, characterized in that polycarbonic acids are used in a ratio of 1 : 4 to 2 : 1 to high-molecular substances.
14. Procedure according to claims 6 to 13, characterized in that the solutions of
20 structural polysaccharides, in particular chitosan and structural proteins, are mixed together at least 12 hours before dialysis.
15. Procedure according to claim 6 to 14, characterized in that dialysis against water takes place in a volume ratio of polymer solution to water of at least 1:100 over the course of more than 16 hours.
- 25 16. Procedure according to claims 6 to 15, characterized in that polyfunctional amino acids are added to the dialysed solutions.

17. Procedure according to claim 6 to 16, characterized in that as polyfunctional amino acids arginine, proline, glutamate, taurine, glycine cysteine, N-acetylcysteine are used in concentrations of 0.1 – 15 %.
18. Procedure according to claim 17, characterized in that the polyfunctional amino acids are used in concentrations of 0.1-15%.
19. Procedure according to claim 6, characterized in that glutaraldehyde is used as the bifunctional cross-linking agent.
20. Procedure according to claim 6 to 19, characterized in that as pharmacologically active substance superoxide dismutase and/or catalase of various origin is used.
21. Procedure according to claim 20, characterized in that superoxide dismutase and/or catalase are used in a concentration of 0.001 to 0.1 % to the polymer base.
22. Procedure according to claim 6 to 21, characterized in that as pharmacologically active substance β -carotene of various origin is used.
23. Procedure according to claim 22, characterized in that as pharmacologically active substance β -carotene in liposomal form is used.
24. Procedure according to claim 22 or 23, characterized in that β -carotene in a concentration of 0.001 to 0.05 % to the polymer base is used.
25. Procedure according to claims 6 to 24, characterized in that as excipients antibacterial substances chosen from chlorhexidine, PolySept, polihexanide, plasticizers, high-molecular substances, that guarantee adhesion to the wound surface and/or excipients that influence the elimination of pharmaceutically active substances are used.
26. Procedure according to claim 25, characterized in that antibacterial substances in a concentration of 0.01 to 0.6 % to the polymer base are used.
27. Procedure according to claim 25 or 26, characterized in that the additives/excipients are added to the dialysate in a concentration of 10 – 30 %.

28. Procedure according to claim 27, characterized in that as excipients polyvinyl alcohol and polyvinylpyrrolidone are used.
29. Use of a wound dressing according to claim 1 to 5 or produced according to claim 6 to 28 for the production of an agent for the accelerated healing of post-traumatic and surgical wounds.
30. Use of a wound dressing according to claims 1 to 5 or manufactured according to claim 6 to 28 for the preparation of an agent, characterized in that the healing of first to third degree burns is accelerated.
31. Use of a wound dressing according to one of claims 1 to 6, or manufactured according to claim 6 to 28 for the preparation of an agent, characterized in that the healing of infected or chronic burns of varying etiology is accelerated.
32. Use of a wound dressing according to claim 1 to 5, or manufactured according to claim 6 to 28 for the accelerated healing of post-traumatic and surgical chronic, infected wounds or burns.